GPS/GSM/GPRS TRACKER

USER MANUAL

Preface

Thank you for purchasing the GPS Tracker. This manual shows how to operate the device smoothly and correctly. Make sure to read this manual carefully before using this product. Please note that specification and information are subject to changes without prior notice in this manual. Any change will be integrated in the latest release. The manufacturer assumes no responsibility for any errors or omissions in this document

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1. SUMMARY

Working Based on existing GSM/GPRS network and GPS satellites, this product can locate and monitor any remote targets by SMS or GPRS.

2. APPLICATION

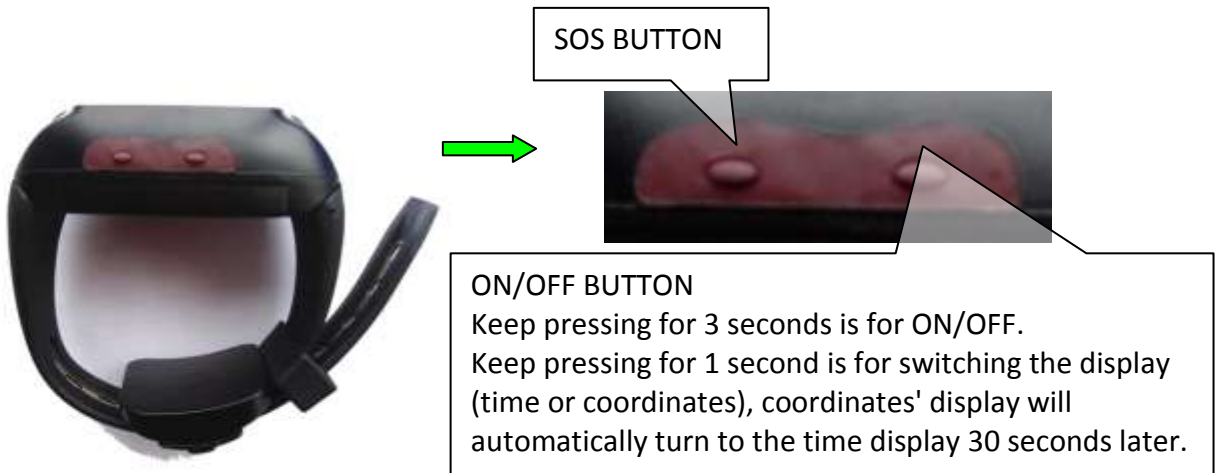
- Vehicle rental / Fleet management etc.
- Protecting child / the old/ the disabled / pet etc.
- Provide peace-of-mind for businessmen.

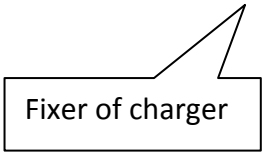
- Tracking criminals secretly.

3. HARDWARE

3.1 Front face

3.2 Side


SOS BUTTON
ON/OFF BUTTON
Keep pressing for 3 seconds is for ON/OFF.
Keep pressing for 1 second is for switching the display (time or coordinates), coordinates' display will automatically turn to the time display 30 seconds later.



3.3 Rear

4. SPECIFICATION

CONTENT	SPEC
Dimension	73mm*54mm*23mm
Weight	120g
Network	GSM / GPRS
Band	850/1800/1900 or 900/1800/1900 or 850/900/1800/1900 MHz
Protocol	TCP or UDP
GPS chip	SIRF III chip
GSM module	Simcom SIM300/SIM340
Solution	ARM7
GPS sensitivity	-159 dBm
GPS accuracy	5m (20m after satellite drift)
Time to first fix	Cold status = 45s; Warm status = 35s; Hot status = 1s
Wall charger	Input (110~220V) => Output (5V)
Car charger	Input (9~24V) => Output (5V)
Battery	Chargeable changeable 3.7V 850mAh Li-ion battery
Battery life	80 hours
Storage temp.	-40 °C ~ +85 °C
Operation temp.	-20 °C ~ +55 °C

Humidity	5% ~ 95% non-condensing

5. USAGE

5.1 STRARUP

- Put the SIM card and battery in place.
- Turn on the tracker ***outdoors*** by pressing the "ON/OFF" button until the indicator is on. (The trackercan also startup automatically when the battery / external power is connected. It's decided by the firmware of the tracker)
- For first use, please initialize the unit to make it as default setting.
- In 10 or 40 seconds, the tracker will begin to work and acquire the GSM signal, as well as the GPS signal. The indicator will keep flashing once every 4 seconds when the tracker gets valid signals.
- After that, you can do all the settings as below.

5.2 INITIALIZATION

Send SMS command "***begin+password***" to initialize all the settings, for example "begin123456". You will receive a reply as "begin ok!" if the setting is successful. (***123456 is the default password***).

5.3 PASSWORD

Send SMS command "***password+old password+space+new password***" to change the password, for example "password123456 790307".
Notice:

- Be sure to keep the new password in mind, you have to upload the software to restore the original setting in case of losing the new password.
- Make sure the new password is in 6 digits, or else the the setting can't be successful.

5.4 AUTHORIZATION

You can authorize total 5 numbers as authorized number. These numbers own the rights to receive geo-info and alarm messages. Please do followings regarding the authorization.

- Call the tracker or send SMS to the tracker, if you can get 10 replies from the tracker, you number will be regarded as authorized number automatically.
- Send SMS command "***admin+password+space+cell phone number***" to set up an authorized number, for example "admin123456 13888888888". You will receive a reply as "admin ok!" if the setting is successful.
- To delete an authorized number, send SMS command "noadmin+password+space+ cell phone number", for example "noadmin123456 13888888888".
- For roaming purpose, you have to add your country code ahead of the phone number.

(Before setting the authorized number, all the numbers can get reply from the tracker by calling or SMS command; after setting, only the authorized number own the rights.
If an un-authorized number call the unit, there will be no response from the tracker.
If an un-authorized number know the password, then it can set the tracker. Since it can't set the authorized number, but it can send "begin123456" to initialize the tracker, then all authorized number will be removed. So take care of your password.)

5.5 REAL-TIME POLLING

When an authorized number call the tracker (suppose there're authorized number), the tracker will hang up the call and reply a message with real-time geo-info.

5.6 AUTO TRACK

Do following settings, then tracker will send geo-info to you for certain times with certain interval. For example "t030s005n123456" means sending total 5 messages with the interval 30 seconds.
(***s: second, m: minute, h: hour, and the maximum value of the 3 digits is 255***)
For heaps of geo-info messages, use command as "***t030s***n123456***".

5.7 VOICE SURVEILLANCE (two-way communication)

- Send SMS command "***monitor+password***" to switch to the voice surveillance mode, for example "monitor123456". You will receive reply as "monitor ok!" if the setting is successful. Under this mode, when you call the tracker, the tracker will pick up the call, then you can communicate with with the tracker.
- Send SMS command "***tracker+password***" to switch back to default mode. You will receive reply as "tracker ok!" if the setting is successful.

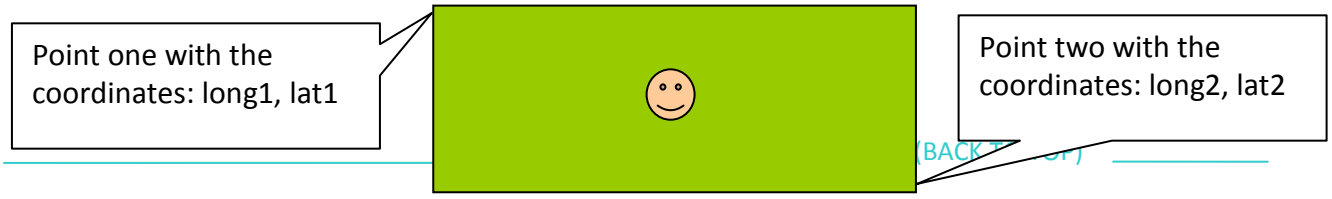
5.8 SOS

Press the SOS button for 3 seconds, it will send "help me! + Geo-info" to all the authorized number. The alarm system can be chosen,

- Keep sending the alarm once every 3 minutes until get reply from the authorized.
- Send only once.

5.9 GEO-FENCE

Send SMS command "***stockade+password+space+long1,lat1;long2,lat2***" to define a restricted area. When the tracker moves out of the area, there will be the alarm as "stockade! + Geo-info".
The command is as , "stockade123456 113.000000e,22.700000n;113.200000e,22.500000n".



Send SMS command "nostockade+password" to cancel the geo-fence.

5.10 MOVEMENT ALARM

Send SMS command "***move+password***" to define a circle (the radius is 500 meters, and the center of the circle is the position of the tracker when it received the command), for example "move123456". You will receive reply as "move ok!" if the setting is successful. When the tracker moves out of the area, there will be the alarm as "move! + Geo-info".
Send SMS command "nomove+password" to cancel the movement alarm.

5.11 OVERSPEED ALARM

Send SMS command "***speed+password+space+speed***" to define a speed limit, for example "speed123456 080" (suppose the speed limit is 80km/h). You will receive reply as "speed ok!" if the setting is successful. When the tracker moves exceeding 80km/h, there will be the alarm as "speed+080! + Geo-info". It will alarm once for each setting.
Send SMS command "nospeed+password" to cancel the movement alarm.
(Notice: It's recommended that the speed limit is set at no less than 50km/h, because the GPS signal may be influenced by clouds etc. So as default we use some kind of speed filter, if the speed is less than 30km/h, we regard it as zero.)

5.12 LOW BATTERY

When the voltage of battery is low than 3.7V, there will be the low battery alarm, the SMS format is "low battery + Geo-info", and the message sending interval is 30 minutes.

5.13 HOME

Send SMS command "***home+password+space+content***" to insert a content in the message from the tracker, for example "home123456 gps" then the "gps" will display in all geo-info from tracker. Usually, we use this function for some advertisement purpose. You can set the content as the name of your company. You can also set the content as the user's name, for example if you set "home123456 TOM" then you will see from the message that the tracker's user is TOM.
Send SMS command "home+password+space+space" to make the content empty.

5.14 IMEI

Send SMS command "imei+password" to check the IMEI number of the tracker. The IMEI number is the identify number of the GSM module, and it's also the identify number of the tracker.

5.15 SMS CENTER

Send SMS command "***adminsms+password+space+cell phone number***" to set the SMS center, for example "adminsms123456 13888888888". Once this center is set, if the authorized numbers ask for the Geo-info, all the Geo-info will be sent to the SMS center.
The format of the message will be "authorized number + Geo-info".
(This function is mostly used for SMS control center.)
Send SMS command "noadminsms+password" to cancel the SMS center.

5.16 BELT-OPEN ALARM
Send SMS command "***openwatch+password***" to set the belt-open alarm. You will receive reply as "openwatch ok!" if the setting is successful.
Then if you open the belt or the belt is broken, 3 minutes later there will be an alarm sent to authorized number.
Send SMS command "noopenwatch+password" to disable the belt-open alarm function.

5.17 GPRS SETTING
Because of high speed and low cost, GPRS is mostly used for managing lots of GPS trackers. In order to use the GPRS function, first you need to own a tracking server (control center), which is used for receive GPRS data and show the data on certain map. Then we need to do following settings.

- Set APN

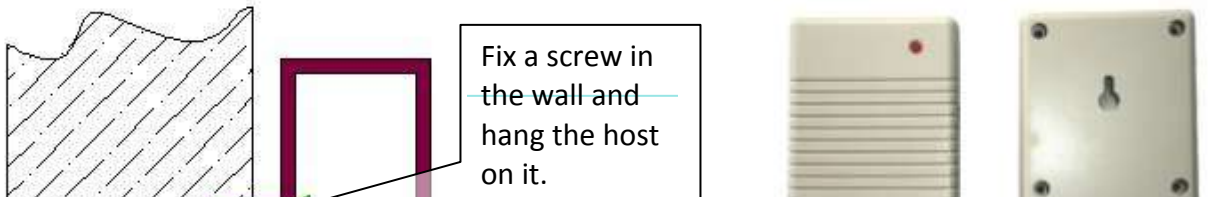
APN means access point name, it's decided by the SIM provide, you can check this with the telephone company. If you want to use their network for GPRS communication, you must set this.
Send SMS command "***apn+password+space+apn content***", for example "apn123456 internet". You will receive reply as "apn ok!" if the setting is successful.
In some cases, there's also APN user and APN password. If so, you need to set them also.
Send SMS command "***apnuser+password+space+content***" to set the APN username.
Send SMS command "***apnpasswd+password+space+content***" to set the APN password.

- Set IP and Port

The IP is the address of your network, and the Port is related to certain computer. After you set this, all data from the tracker will be sent to this address. That means there will be no SMS geo-info any more. You can say, IP has more priority than authorized number.
Send SMS command "***adminip+password+space+ip content+space+port content***" to set the IP and Port, for example "adminip 211.154.139.227 9001".
(For ARM7 solution, tracker can also accept GPRS commands, the format of the commands via GPRS are the same as SMS commands mentioned above.)

6. HOME MONITORING

6.1 ASSEMBLE THE HOST



6.2 SET THE HOME MONITORING

First insert the battery to the host and connect the host to the power supply. The indicator of the host will light which means working normally.

Send SMS command "***openhome+password***" to enable the home minitoring. You will receive reply as "openhome ok!" if the setting is successful.

Then if you call the tracker, it will give you indication as power off. When the tracker leave away the host for 20~30 meters, the tracker's display will flash blue light, meantime the tracker will automatically run its GSM module and send alarm to the authorized number. (The distance is based on various kinds of conditions.)

Send SMS command "noopenhome+password" to disable the home mornitoring. You will receive reply as "noopenhome ok!" if the setting is successful. (The initialization command "begin" can also cancel this function.)

6.3 ALARM FOR TAKE HOST AWAY

When the home monitoring function is ON, if you take the host away from the fixed magnet, there will be an alarm sent to authorized number 3 minutes later.

7. CAUTIONS

- Keep the unit dry. Any liquid, such as rain, moisture may destroy or damage in inside circuit.
- Don't use & store the unit in dusty places.
- Don't put the unit in overheated or overcooled places.
- Handle carefully, don't vibrate or shake it violently.
- Clear the unit with dry cloth, don't clean in chemicals, detergent.
- Don't disassemble or refit the unit.
- Please use the battery and charger provided by manufacturer, using other batteries or chargers may cause unwanted situation.
- Don't dismount the antenna randomly, or use other antenna. This may interfere with the transmission and increase the radiation as well.

8. FAULTS & SOLUTIONS

FAULTS	SOLUTIONS
Startup fail	Check the battery and see if it's fully charged or correctly installed. Check if the SIM card is correctly installed.
Hangup fail	Check if the number is authorized number.
Monitor fail	Check if the authorized number is set, or in the coverage of signal.
Location report in zeros	Don't use the tracker in place without GPS coverage, especially when start it up.